

# Advanced Instrumentation for Aircraft Icing Research

*Aerometrics/TSI Inc.  
Shoreview, MN*

## INNOVATION

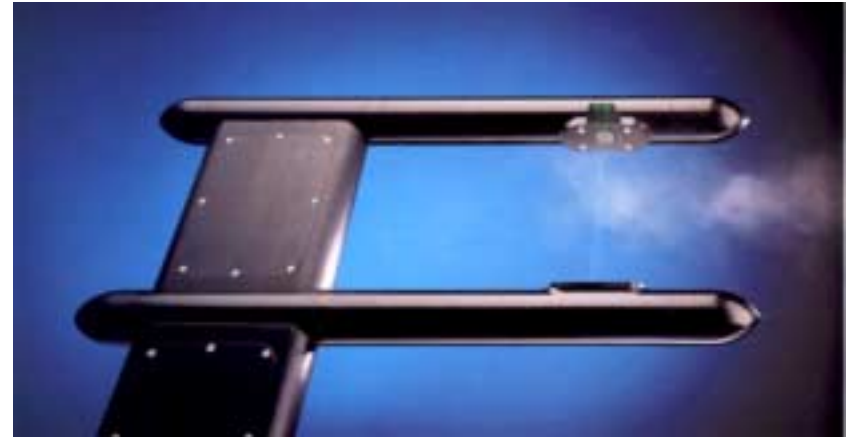
An all weather instrument for measuring  
cloud droplets size and velocity

## ACCOMPLISHMENTS

- ◆ Phase Doppler technique was successfully adapted to cloud droplet size and velocity measurement
- ◆ This instrument was successfully tested in the NASA Glenn Research Center (GRC) Icing Tunnel

## COMMERCIALIZATION

- ◆ Further development of an advanced Phase Doppler signal processor was done by Aerometrics/TSI, and is presently being sold by TSI Inc.
- ◆ Aerometrics was acquired by TSI in 1996
- ◆ Boeing purchased this instrument system for cloud certification of their aircraft
- ◆ Two of these instrument systems were purchased by the Italian Government for calibrating their Icing Tunnel



*ADA-100 Icing Probe of TSI*

## GOVERNMENT/SCIENCE APPLICATIONS

- ◆ An advanced Phase Doppler signal processor was developed under a \$150K Phase III effort with GRC
- ◆ For use in the certification of commercial aircraft
- ◆ For use in cloud physics studies, including in-flight tests